

BOTTLE SOLAR HEATER

Step 1: Clean, Prep, and Paint



Peel off all the labels

Give the smallest bottle a light spray with the flat black so it dries fast, a second coat may or may not be necessary.

Step 2: Cut Insulating Bottles



The 2-litre and 1.5 litre bottles are insulating bottles to keep the solar heat in the centre 1.5l bottle. Cut the bottoms off where the curve of the bottom stops. Add more clear bottles of increasing sizes could be added for more insulation.

Step 3: Install Connection Hose

Cut about 1.5 to 2 inches of the 16mm rubber heater hose. Wet the hose and wrestle it into the 440ml bottle lip about 1/2". Next wedge the hose with 440ml bottle up into the 2-liter bottle; you may need a screwdriver to help pull the hose through the neck. This holds the two bottles together into one bottle and lets you fill from the 2-liter spout into the 440ml bottle.



Step 4: Add Reflector Foil Tape



Attach foil tape to the outside of the 2-liter, just go halfway around the bottle. This becomes somewhat of a parabolic reflector and lets the sunshine a little brighter on the backside of the centre bottle.

Step 5: Performance Notes

Fill it with water, leave some air for expansion, put on the lid slightly loose and lean it up against something while facing the sun. The foil side is the side away from the sun.

Now wait a while; the time depends on outside air temps and the position of the sun.